

Appln No. 09/944,905
Amdt date October 27, 2005
Reply to Office action of July 27, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A system for interacting with end user terminals over a first communications network, the system comprising:
 - a plurality of servers coupled to receive communication from the end user terminals over the first communications network;
 - an interface disposed between the plurality of servers and end user terminals, the interface being operative to receive requests from the end user terminals and to distribute the requests to the plurality of servers;
 - a second communication network coupled to provide communication between the servers in the plurality of servers;
 - a first computer program segment resident at each ~~in at least one~~ of the plurality of servers wherein said program:
 - receives a request from an end user terminal,
 - processes the request, and
 - broadcasts data regarding the processed request to the other servers,
 - a second computer program segment resident in at least one of the plurality of servers wherein the said program stores data broadcast from at least one other server,
 - wherein. one of the plurality of servers receiving one of the requests is selected based on a selection mechanism, the selection mechanism being configured to substantially evenly distribute request processing burdens amongst the plurality of servers.
2. (Original) The system of claim 1, wherein the first program segment broadcasts data over the second communication network to the second program segment.

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3. (Original) The system of claim 2, wherein the second communications network comprises an Ethernet network.

4. (Original) The system of claim 3, wherein the second communications network comprises a gigabit Ethernet network.

5. (Original) The system of claim 1, wherein the end user terminals comprise ITV receivers, and wherein the requests from the end user terminals are requests from the ITV receivers to retrieve and transmit interactive content to the ITV receivers.

6. (Original) The system of claim 1, further including a database for permanent storage of the data relating to processed requests.

7. (Original) The system of claim 6, wherein the database is coupled to the second communications network.

8. (Original) The system of claim 1, wherein the interface disposed between the plurality of servers and end user terminals further includes means for routing incoming requests to the respective servers.

9. (Original) The system of claim 8, wherein the means for routing comprises the Domain Name Server function of the Internet.

10. (Original) The system of claim 8, wherein the means for routing comprises a load balancing system (LBS).

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11. (Original) The system of claim 2, further including a process coupled to the second communications network, wherein the process is programmed to monitor the network for instances of specific transactions.

12. (Original) The system of claim 11, wherein one of the process comprises a threshold monitoring process coupled to a content encoder, wherein the threshold monitoring process is programmed to process data transmitted over the second communications network, determine that a threshold has been exceeded, and to transmit a corresponding notification to the content encoder.

13. (Original) The system of claim 12, further including a frame relay line connected to the threshold monitoring process and the content encoder to transmit information there between.

14. (Original) The system of claim 11, wherein the process comprises a transaction processing process.

15. (Currently Amended) A method of interacting with user terminals over a communications network comprising:

receiving first and second [[a]] requests from a user terminal;

allocating the first request to a first server and the second request to a second one of a plurality of server[[s]], the first and second one of the plurality of servers being selected according to a selection mechanism, the selection mechanism being configured to substantially evenly distribute request processing burdens amongst the plurality of servers;

processing the first request at one of the plurality of first server[[s]] and the second request at the second server;

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transmitting first data relating to the first request to ~~the other~~ at least the second server[[s]] and second data relating to the second request to at least the first ~~in the plurality of~~ server[[s]]; and

storing the first and second data in respectively the first and second ~~relating to the request at each other~~ servers.

16. (Original) The method of claim 15, wherein transmitting data is performed over a private network.

17. (Original) The method of claim 15, wherein transmitting data is performed in a LBS.

18. (Original) The method of claim 17 wherein the LBS, which transmits data, distributes requests to the plurality of servers.

19. (Original) The method of claim 15, wherein allocating the request uses a round robin allocation to distribute the load over the plurality of servers.

20. (Original) The method of claim 15, wherein forwarding the request further comprises performing a load analysis to distribute the incoming requests over the plurality of servers.

21. (Original) The method of claim 15, wherein processing the request comprises retrieving and transmitting interactive content to an interactive television receiver.

22. (Original) The method of claim 15, further comprising monitoring the data relating to the request at each server.

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23. (Original) The method of claim 22, further comprising:
detecting a threshold from the monitored data;
providing an indication of detection of the threshold to a content encoder;
encoding the indication of detection of the threshold; and
providing the encoded indication of reaching the threshold to at least one ITV receiver.

24. (Original) The method of claim 23 wherein detecting a data threshold comprises detecting a certain number of users.

25. (Original) The method of claim 24 wherein encoding the indication of detecting the threshold comprises placing an indication of detecting the threshold within a video signal to be provided to an ITV receiver.

26. (Previously Presented) A system for interacting with end user terminals over a communications network, the system comprising:

plural servers adapted for communication with the respective terminals over the communications network, wherein the servers are connected for communication with the other respective servers;

an interface connected to the respective servers and operative to receive requests from the user terminals and to route the requests to the respective servers; and

wherein each of the servers is programmed to receive a request from one of the users, process the request, and broadcast data regarding the processed request to the other servers, and wherein the servers are each programmed to store the broadcast data in respective local memories, and wherein one of the plurality of servers receiving one of the requests is selected based on a selection mechanism, the selection mechanism being configured to substantially evenly distribute request processing burdens amongst the plurality of servers.

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27. (Original) The system of claim 26, further including a back-end network connected to each of the servers, and wherein the servers are programmed to broadcast the data over the back-end network.

28. (Original) The system of claim 27, wherein the terminals comprise ITV receivers, and wherein the servers are responsive to requests from the ITV receivers to retrieve and transmit interactive content to the terminals.

29. (Original) The system of claim 26, further including a database for storage of the data relating to processed requests.

30. (Original) The system of claim 26, further including a plurality of processes connected to the back-end network, wherein each process is programmed to monitor the network for certain data and to process the appropriate data.

31. (Original) The system of claim 31, wherein one of the processes comprises a threshold monitoring process connected to a content encoder, wherein the threshold monitoring process is programmed to process data transmitted over the back-end network, determine that a threshold has been exceeded, and to transmit corresponding data to the content encoder.

32. (Currently Amended) A method of interacting with end user terminals over a communications network, comprising:

receiving ~~[[a]]~~ first and second requests from a user terminal;

forwarding the first request to the first server and the second request to a second ~~one of a~~
~~plurality of server[[s]], the one of the plurality of~~ first and second servers being selected
according to a selection mechanism, the selection mechanism being configured to substantially
evenly distribute request processing burdens amongst the plurality of servers;

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processing the first request at the first ~~[[one]]~~ server and the second request at the second server;

transmitting first data relating to the first request to at least the first ~~other~~ server~~[[s]]~~ and second data relating to the second request to at least the second server; and

storing the first and second data at ~~[[each]]~~ respectively the first and second servers.

33. (Original) The method of claim 32, wherein transmitting data is performed over a private network.

34. (Original) The method of claim 32, wherein forwarding the request is done in a random manner to distribute the load over the plurality of servers.

35. (Original) The method of claim 32, wherein processing the request comprises retrieving and transmitting interactive content to an interactive television receiver.

36. (Previously Presented) The method of claim 1, wherein the selection mechanism randomly selects the one of the plurality of servers.

37. (Previously Presented) The method of claim 1, wherein the selection mechanism is a round robin selection mechanism.

38. (Previously Presented) The method of claim 1, wherein each server maintains all data needed for handling a request.